MANAGEMENT ASPECTS OF MILITARY PROCUREMENT, 1967-1973.

A Selected Bibliography. 1973.

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October 17, 1973

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INTRODUCTION

The development and procurement of major weapon systems are a challenge to the nation's ability to integrate national defense planning with effective management of increasingly scarce and costly resources. This challenge has been intensified in the first instance by the sense of urgency which has surrounded defense planning since the development of nuclear weapons and sophisticated methods for their delivery and, more recently, by the adoption of an all-volunteer army with greatly increased personnel costs which now account for from 56% to 66% of the defense budget. 1/

It is an all too familiar fact that the cost of weapons has been increasing dramatically in recent years. In some cases, these cost increases have greatly exceeded original estimates and have become known as cost "overruns." To some extent cost growth has been the result of the higher cost of technology and of continuing inflation. In September of 1971, the Senate Armed Services Committee reported:

> It was to be expected that a new fighter aircraft for the mid-1970's would cost considerably more than the fighters of World War II vintage. It is striking, however, that fighter aircraft now being developed for procurement in the mid-1970's will cost five to six times more than comparable aircraft at the beginning of the 1960's. The cost of tanks is increasing over fourfold during the 1965-75 decade ....If the geometric cost increase for weapon systems is not sharply reversed, then even significant increases in the defense budget may not insure the force levels required for our national security. 2/

1/ Congressional Record [daily ed.] v. 118, Feb. 9, 1972: S1461 - S1463.

2/ U.S. Congress. Senate. Committee on Armed Services. Authorizing Appropriations for Fiscal Year 1972 for Military Procurement, Research and Development, for the Construction of Facilities for the Safeguard Anti-Ballistic Missile System, Reserve Component Strength, and for Other Purposes; Report to Accompany H.R. 8687. Washington, U.S. Govt. Print. Off., 1971. (92d Congress, 1st session. Senate. Report no. 92-359). 17 p.

Varying management approaches have been made in the United States to try to maintain a proper balance between meeting urgent defense priorities and keeping costs under control. These range from the "total package procurement" policy of Secretary of Defense McNamara (which included the concept of "concurrency" -- the initiation of production of weapon system components prior to completion of research, development, testing, and evaluation of all components) to the "fly-before-buy" and more recent "design-to-cost" innovations of Melvin Laird and David Packard.

In the discharge of its function of authorizing and appropriating the billions of dollars needed for U.S. military procurement programs, the Congress has been required to come to grips with an evolution of management technology almost as rapid and unpredictable as the scientific technology underlying the actual development of weapons. Yet it is no more reasonable to expect each Member of Congress to be expert in procurement technology than in the many scientific disciplines involved in weapons design.

It is the purpose of this selected bibliography to provide a broad range of sources which will assist the non-specialist in acquiring a working knowledge of the fundamental problems of procurement management and the various approaches which have been and are being tried to solve them.

The bibliography is divided into three parts. Part I contains citations of books, government documents, and the periodical literature. Articles in the periodical literature are briefly annotated. All entries in Part I which are available at the Library of Congress are identified by Library of Congress call numbers.

Part II lists government-sponsored technical reports which have been cleared for release to the general public. These entries have been annotated in some depth by their authors or their sponsoring government agencies. All are available at the Defense Documentation Center and may be ordered by reference to the AD number attached to each entry. All of these entries either are, or will later be, available at the Library of Congress on microfiche.

Part III lists government-sponsored technical reports which, though bearing no security classification, are not available to the general public. These limited-distribution reports are, however, available to government agencies and Congressional offices by direct request to the sponsoring agency according to the distribution statement accompanying each item. These entries are also fully annotated and identified with AD numbers.

Because of the rapid and extensive changes in the management approach to military procurement in recent years, no attempt has been made to make this bibliography completely comprehensive. The time-frame of 1967 to 1973 was selected on the grounds that these years encompassed the major changes in approach to procurement management initiated by Secretary Laird, allowing direct comparison with the systems in use during the previous Administration.

PART I: Books, Government Documents and Periodical Literature

Art, Robert J. The TFX decision; McNamara and the military. Boston, Little, Brown [1968] 202 p. UA23.A73
Includes bibliographical references.

Baumgartner, John S. The program manager and the subcontractor: hands on or hands off? Defense management journal, v. 9, July 1973: 48-51. UC20.A3, v. 9
Outlines several measures the DOD program manager may take to control contract costs while still keeping a "hands off" attitude toward subcontractors.

Blackstone, Erwin A. Monopsony power, reciprocal buying, and government contracts: the General Dynamics case. Antitrust bulletin, v. 17, summer 1972: 445-466. Law
"In summary, the contract system's purpose of encouraging efficiency may be frustrated by diversification. Diversified government contractors now enjoy the additional option of reciprocity as a means of exploiting whatever purchasing or monopsony power they possess to conceal defense profits."

Burnham, Frank. The Pentagon and industry: antagonism replacing trust. Armed forces management, v. 16, Jan. 1970: 33-37. UB153.A65, v. 16
"Despite efforts by the new Laird-Packard team in DOD to improve procurement policies, a multitude of serious and worsening gripes are heard from the industry side of the bargaining table."

Burt, David N. "Should cost;" a multimillion-dollar savings. Air University review, v. 23, Sept.-Oct. 1972: 38-44. TL501.A5574, v. 23
Outlines a method for cost analysis of defense contracts.

Campbell, R. R. The arms procurement art. Ordnance, v. 54, Nov.-Dec. 1969: 306-309. UF1.067, v. 54
"The security of the United States in today's world depends not only on the ability to mobilize manpower but also on the ability to produce the weapons, equipment, and supplies necessary for national defense."

Charles, Robert H. The short, misunderstood life of total-package procurement. Innovation, no. 20, Apr. 1971: 10-17. T1.I55, 1971
The story of the "total package procurement" system--the first application of competition to the procurement of a major new defense system in the purchase of the giant C-5A cargo airplane.

Cross, John G. Incentive pricing and utility regulation. Quarterly journal of economics, v. 84, May 1970: 236-253. HB1.Q3, v. 84
Mathematical analysis.

Design to a cost. Defense management journal, v. 9, July 1973: 3-30, 61. UC20.A3, v. 9

Six articles by defense procurement specialists and industrial representatives on implementation of the "design to cost" procurement policy which involves "shifting from an almost exclusive emphasis on achieving the highest possible state-of-the-art performance in every aspect of every system" to "obtaining the best possible overall defense posture for the budget dollars available."

DOD Contract Management Conference, Dallas, 1968. Impact-73; conference proceedings [and reports of panels 1-14. Washington, 1968] 14 v. UC267.D23 1968

Contents.--Conference proceedings.--Panel 1: Organization for Contract Administration Services (CAS).--Panel 2: Evaluation of CAS operations.--Panel 3: Management science in the procurement cycle.--Panel 4: CAS techniques.--Panel 5: Manpower.--Panel 6: CAS resources management.--Panel 7: The CAS computer communication network.--Panel 8: Engineering role in CAS.--Panel 9: Quality assurance.--Panel 10: Production surveillance and reporting.--Panel 11: Property.--Panel 12: Logistic system interfaces.--Panel 13: Evaluating contractor performance/capability.--Panel 14: Pricing.

----- Impact 73; conference recommendations. [Alexandria, Va., Defense Supply Agency, 1969] 295 p. UC267.D23 1968a

"This volume represents the final formal publication of the Impact 73 proceedings."

Drake, Hudson B. Major DOD procurements at war with reality. Harvard business review, v. 48, Jan.-Feb. 1970: 119-140. HF5001.H3, v. 48

"...the government does not recognize the softness of the technologies used in [advanced weapon] systems, and tries to write and administer contracts as though the technology were well in hand and no unexpected problems could possibly crop up."

Farrington, Lester C., Jr. Reporting on major weapon systems. GAO review, spring 1972: 40-46. HJ9701.G3, 1972

"This article discusses the operations of GAO's Major Acquisitions Group in reviews of major weapon systems, with particular emphasis on its unique analysis and reporting to the congressional committees concerned with weapon acquisitions."

Feasibility of applying uniform cost accounting standard to defense procurements. Federal accountant, v. 18, Dec. 1969: 20-37. HJ9801.F4, v. 18

"Federal Government Accountants Association Ad Hoc Committee Research report July 1969."

Feasibility of applying uniform cost accounting standards to negotiated defense contracts--further developments. GAO review, summer 1970: 41-47. HJ9701.G3, 1970

Highlights to testimony before Senate Banking and Currency Committee.

Financial Management Conference, 2d, Washington, D.C., 1973. Principal addresses. [n.p.] Joint Financial Management Improvement Program [1973] 59 p. HJ257.2.F55 1973

Contents.--Personal accountability in financial management by, H. Rickover.--The role of the financial manager in the decision-making process, by R. Moot.--Measuring and enhancing Federal productivity, by T. Morris.--Meeting congressional needs for financial information, by K. Hunter.

Fisher, Gene H. Cost considerations in systems analysis. New York, American Elsevier Pub. Co., 1971. 334 p. HF5686.C8F548

Includes bibliographical references.

Also available on microfiche AD-728 481.

The book is concerned with cost considerations in systems analysis. While effectiveness or utility considerations are thus not the prime focus, the discussion of cost analysis concepts and methods is always presented in the systems analysis context. The following chapters are concerned primarily with questions such as the following: what concepts of cost are appropriate for dealing with resource considerations in systems analyses of long-range planning problems. What analytical methods should be used in assessing the resource impact of proposed future alternatives for meeting objectives in a given problem area. How might uncertainties be taken into account explicitly in such analyses. How should the results of cost analyses be presented in order to be most useful in the larger systems analysis and hence to the decision-makers. The book limits its attention to questions of national security. Thus, in discussing specific concepts and methods of analysis, the concern is primarily with assessing the cost implications of alternative future military capabilities.

Fisher, Irving Nuttall. A reappraisal of incentive contracting experience. Santa Monica, Calif., Rand Corp., 1968. 48 p. (Rand Corporation. Memorandum RM-5700-PR) Q180.A1R36 no. 5700

"Research ... supported by the United States Air Force under Project Rand-contract no. F44620-67-C-0045."

"This study is part of RAND's continuing program of procurement research. It deals with one aspect of military procurement: the effectiveness of incentive contracts as a means of controlling defense procurement costs. This study identifies the various effects that these contracts may have on contract costs and on contractors' performance, and questions the validity of the cost savings commonly attributed to these contracts. Several possible strategies for improving their effectiveness are also discussed. Attention is given to the importance of the target cost in providing real and meaningful incentives for increased efficiency."

Harvey, Milton H. Adequacy of contractors' cost records. GAO review, spring 1971: 17-22. HJ9701.G3, 1971
Report on "a special inquiry into the nature and extent of cost accounting systems and related records maintained by selected contractors."

Goodhue, Lowell H. Fair profits from defense business. Harvard business review, v. 50, Mar.-Apr. 1972: 97-107. HF5001.H3, v. 50
"Contractors and the government will benefit when the profit policy for negotiated DOD contracts reflects return on investment."

Hassen, Samuel. Culprit of contract appeals is ambiguous specifications. Defense management journal, v. 9, July 1973: 43-47. UC20.A3, v. 9
"Specifications containing ambiguities and language capable to diverse interpretations introduce into the contractual document possible contract disputes with attendant increase in costs."

Hessman, James D. Is there a better way to spend $60-billion per year? Armed forces journal, v. 108, Apr. 19, 1971: 26-28, 40. U1.A66, v. 108
Reviews the work of the Commission on Government Procurement established in Nov. 1969.

Holt, Paul W. Controls begin at home in design to cost contracting. Defense management journal, v. 9, Apr. 1973: 54-59. UC20.A3, v. 9
"For the first time in U.S. Army helicopter procurement history, the objective of designing a major defense system to fit within the framework of a predetermined production selling price has been set forth as a contract design paremeter in the basic engineering development phase of the Army Utility Tactical Transport Aircraft System (UTTAS) program, and a substantial financial incentive has been assigned to this objective."

Kanter, Arnold, and Stuart J. Thorson. The weapons procurement process: choosing among competing theories. Public policy, v. 20, fall 1972: 479-524. JA51.P8, v. 20
Offers an understanding of weapons procurement as an aspect of U.S. defense policy.

Kurth, Edward H. "Cost or pricing data" isn't one word, Mr. Mallby. Business lawyer, v. 26, Jan. 1971: 953-958. Law
A complaint about Defense Department accounting requirements.

Kurth, James R. A widening gyre: the logic of American weapons procurement. Public policy, v. 19, summer 1971: 373-404. JA51.P8, v. 19
Some basic questions about American military policy in general and military procurement in particular.

Levine, Philip A. The making of a standard—1972. GAO review, winter 1973: 48-51. HJ9701.G3, 1973

Discussion, by a staff member of the Cost Accounting Standards Board (CASB), of the genesis of two CASB standards promulgated in 1972. The standards are to be followed by Federal defense contractors and "hopefully" in all cost accounting situations.

Lincoln, James B. Trends in the weapons systems acquisition process. Military review, v. 51, Aug. 1971: 40-52. Z6723.U35, v. 51

"The process has been extremely complex in terms of risk and uncertainties," concludes the author.

McClenon, Paul R. Operations of the Cost Accounting Standards Board. Journal of accountancy, v. 135, Apr. 1973: 58-62. HF5601.J7, v. 135

"A project director of the Cost Accounting Standards Board discusses the early operations and problems of the Board."

May, Donald. Pentagon, GAO attempt to find ways to measure, control cost overruns. National journal, v. 2, Feb. 14, 1970: 353-359. JK1.N28, v. 2

Morse, Ellsworth H., Jr. GAO, defense contractors, and the Department of Defense. Federal accountant, v. 20, Sept. 1971: 106-119. HJ9801.F4, v. 20

Survey of recent GAO reports involving defense profit levels, "should cost" reviews, government-owned property in custody of contractors, and performance under Truth-in-Negotiation Act.

Murphy, Charles J. V. The Pentagon enters its era of austerity. Fortune, v. 86, Dec. 1972: 142-146, 148, 150. HF5001.F7, v. 86

"Though beset by unpopularity and inflation, the defense budget must still provide for our national security. So the armed forces are radically changing the way they procure their weapons."

National Security Industrial Association. Defense acquisition study. Washington, 1970. 103 p. UC263.N36

Bibliography: p. 85-98

Examines each part of the defense acquisition process--planning, buying, administration and the Congress' role. One recommendation the report makes is that "Congress should more clearly define its informational requirements and the Department of Defense should institute a program to improve communications with Congress. DOD should develop a method for consistent and precise reporting to appropriate committees of Congress on major weapons requirements and on plans for their acquisition. This should be accomplished at early stages in the decision making process."

----- Renegotiation Subcommittee. Renegotiation: what it is and how it works. Federal accountant, v. 19, June 1970: 93-107.
HJ9801.F4, v. 19

Onsi, Mohamed. Cost accounting standards and cost estimation for defense contracts. Federal accountant, v. 22, Mar. 1973: 30-40.
HJ9801.F4, v. 22

"The purpose of this paper is to examine whether or not uniform cost accounting standards can contribute significantly to reducing cost overrun, and to show that improving the methods of cost estimation of a weapon system can better reduce cost overrun uncertainty."

O'Roark, Dulaney L., Jr. Extraordinary contractual actions in facilitation of the national defense from a Department of Defense attorney's point of view. Military law review, v. 47, Jan. 1, 1970: 35-103.
Law

"The methods of adjusting contracts for the benefit of both the Government and the contractor are covered in this article. The author discusses at length the standards for evaluating requests for adjustment."

Pace, Dean Francis. Negotiation and management of defense contracts. New York, Wiley-Interscience [1970] 835 p. UC267.P3
Includes bibliographical references.

Packard, David. Packard guidelines on major weapon system acquisitions. Armed forces journal, v. 107, June 13, 1970: 22-23.
U1.A66, v. 107

Text of May 28, 1970, policy memo on major weapon system acquisitions.

Podnos, S. S. A critique on weapon systems management. GAO review, spring 1970: 10-15. HJ9701.G3, 1970
"In this article the author describes and discusses the two basic causes of the performance degradation, schedule slippage, and cost growth, which occur in developing and acquiring weapon systems."

Proxmire, William. Report from wasteland; America's military-industrial complex. Foreword by Paul H. Douglas. New York, Praeger [1970] 248 p. HC110.D4P76

Rice, Berkeley. The C-5A scandal; an inside story of the military-industrial complex. Boston, Houghton Mifflin, 1971. 238 p.
TL686.L6R5

Includes bibliographical references.

Strube, Delbert H. Competitive prototyping. Air University review, v. 23, May-June 1972: 2-11. TL501.A5574, v. 23
Describes a new concept in the Defense Department's procurement process.

Trueger, Paul M. Terminations—cost principles and costing procedures. Journal of accountancy, v. 129, June 1970: 59-64. HF5601.J7, v. 129
"Important factors involved in settlement proposals relating to defense contracts terminated for the convenience of government."

Ulsamer, Edgar. The Advanced Prototype Approach. Air Force magazine, v. 54, Nov. 1971: 25-27. UG633.A65, v. 54
Explains the new, flexible R&D philosophy called the Advanced Prototype Approach.

U.S. Army Materiel Command. Procurement: totaled packaged procurement. [Washington] 1968. 52 p. (AMC pamphlet, AMCP715-5) UC267.U6 1968

U.S. Blue Ribbon Defense Panel. Report to the President and the Secretary of Defense on the Department of Defense. [Washington] Dept. of Defense; [for sale by the Supt. of Docs., U.S. Govt. Print. Off.] 1970. 237 p. UA23.3.A419
Commonly referred to as the Fitzhugh report.

——— Appendix E. Staff report on major systems acquisition process. [Washington] 1970. UA23.3.A419 Suppl. 2

U.S. Commission on Government Procurement. Summary of the report of the Commission on Government Procurement. Washington; For sale by the Supt. of Docs., U.S. Govt. Print. Off., 1972. 143 p. JK1673.A49

U.S. Congress. Joint Economic Committee. Subcommittee on Economy in Government. The acquisition of weapons systems. Hearings, Ninety-first Congress, first session-Ninety-second Congress, first session. Washington, U.S. Govt. Print. Off., 1970-72. 5 v. KF25.E243 1969d
Hearings held Dec. 29, 1969-Mar. 29, 1972.

——— Economics of military procurement. Hearings, Ninetieth Congress, second session. Washington, U.S. Govt. Print. Off., 1968- KF25.E243 1968
Hearings held Nov. 11-14, 1968-

——— The economics of military procurement; report. Washington, U.S. Govt. Print. Off., 1969. 31 p. UC263.A5164 1969
At head of title: 91st Congress, 1st session. Joint committee print.

——— Economy in Government procurement and property management; report. Washington, U.S. Govt. Print. Off., 1968. 12 p. KF30.E242 1968
At head of title: 90th Congress, 2d session. Joint committee print.

U.S. Congress. House. Committee on Armed Services. Subcommittee for Special Investigations. Review of defense procurement policies, procedures, and practices. Hearings, Ninetieth Congress, first-second session, under the authority of H. Res. 124. Washington, U.S. Govt. Print. Off., 1968- KF27.A755 1967
Hearings held Aug. 3, 1967-
Contents.-pt. 1. Introduction and truth in negotiations (Public law 87-653).-pt. 2. Small purchases.-pt. 3. A case study: Navy contract award for design services.

——— Truth in negotiations (H.R. 10573) Hearing, Ninetieth Congress, second session under the authority of H. Res. 124. March 13, 1968. Washington, U.S. Govt. Print. Off., 1968. p. 7567-7592. KF27.A755 1968

U.S. Congress. House. Committee on Government Operations. Government Activities Subcommittee. The efficiency and effectiveness of Renegotiation Board operations. Hearing, Ninety-first Congress, first session and Ninety-second Congress, first session. Washington, U.S. Govt. Print. Off., 1970-71. 2 v. KF27.G662 1969b
Hearings held Sept. 24, 1969 and Apr. 28, 1971.
Contents- pt. 1. Testimony of Vice Admiral H. G. Rickover.- pt.2. Renegotiation Board operations.

U.S. Congress. House. Committee on Government Operations. Legislation and Military Operations Subcommittee. Defense industry profit study of the General Accounting Office. Hearing, Ninety-second Congress, first session. March 26, 1971. Washington, U.S. Govt. Print. Off., 1971. 192 p. KF27.G6674 1971a

U.S. Congress. House. Committee on Government Operations. Military Operations Subcommittee. Policy changes in weapon system procurement. Hearings, Ninety-first Congress, second session. Washington, U.S. Govt. Print. Off., 1970. 339 p. KF27.G668 1970a
Hearings held Sept. 22-30, 1970.

U.S. Congress. Senate. Committee on Armed Services. Advanced prototype. Hearing, Ninety-second Congress, first session. September 9, 1971. Washington, U.S. Govt. Print. Off., 1971. 57 p. KF26.A7 1971g

——— Weapon systems acquisition process. Hearings, Ninety-second Congress, first session - Ninety-second Congress, second session. Washington, U.S. Govt. Print. Off., 1972. 2 v. KF26.A7 1971k
Hearings held Dec. 3, 1971-May 12, 1972.
Includes bibliographical references.

U.S. Congress. Senate. Committee on Government Operations. Permanent Subcommittee on Investigations. TFX contract investigation (second series). Hearings, Ninety-first Congress, second session, pursuant to Senate Resolution 308, 91st Congress. Washington, U.S. Govt. Print. Off., 1970. 3 v. (705 p.) KF26.G658 1970
Hearings held Mar. 24-Apr. 28, 1970.

U.S. Congress. Senate. Committee on the Judiciary. Subcommittee on Anti-trust and Monopoly. Competition in defense procurement. Hearings, Ninetieth Congress, second session, pursuant to S. Res. 233. June 17 and 21 and September 10, 1968. Washington, U.S. Govt. Print. Off., 1969. 916 p. UC267.U6 1969a

----- Competition in defense procurement--1969. Hearing, Ninety-first Congress, first session, pursuant to S. Res. 40. July 14, 1969. Washington, U.S. Govt. Print. Off., 1970. 205 p. KF26.J835 1969c

U.S. Dept. of Defense. Study of cost escalation. Prepared for the Committee on Armed Services, House of Representatives, Unites States Congress. [Washington] 1973. 75 p.

U.S. General Accounting Office. Acquisition of major weapon systems; report to the Congress [on the] Dept. of Defense, by the Comptroller General of the United States. [Washington , 1971] 84 p.
UC263.A5169 1971
"B-163058, Mar. 18, 1971"

----- Application of "should cost" concepts in reviews of contractors' operations; a report to the Congress [on the] Dept. of Defense, by the Comptroller General of the United States. [Washington, 1971]. 37 p.
"B-159896, Feb. 26, 1971"

----- Assessment of Navy should-cost studies; Department of the Navy. [Washington] 1973. 12 p.
"B-159896, May 15, 1973"

----- Cost growth in major weapons systems; report to the Committee on Armed Services, House of Representatives by the Comptroller General of the United States. [Washington, 1973]. 68 p.
UA23.3.U6 1973
"B-163058, Mar. 26, 1973"

----- Feasibility of applying uniform cost accounting standards to negotiated defense contracts. Federal accountant, v. 19, Mar. 1970: 5-20.
HJ9801.F4, v. 19
"Reproduced herewith is the entire text (without appendices) of the Comptroller General's report required by P.L. 90-370. Highlights include a determination of feasibility, a recommendation for applying UCAS to all negotiated contracts, a recognition of a

need for considerable research, and a recommendation that new "machinery" different from that now used for Section XV, ASPR should be established for the development of cost accounting standards."

----- Impartial cost-effectiveness studies found essential to selecting new weapons; report to the Congress [on the] Dept. of Defense, by the Comptroller General of the United States. [Washington, 1972] 35 p.
"B-163058, Aug. 21, 1972"

----- Industrial management reviews of defense contractors' operations; Department of Defense; report to the Congress by the Comptroller General of the United States. [Washington] 1973. 11 p.
"B-159896, June 26, 1973"

----- More competition in emergency defense procurements found possible; report to the Congress [on the] Dept. of Defense, by the Comptroller General of the United States. [Washington, 1971] 52 p.
"B-171561, Mar. 25, 1971"

----- Need for improving administration of the cost or pricing data requirements of Public Law 87-653 in the award of prime contracts and subcontracts, Department of Defense; report to the Congress of the United States by the Comptroller General of the United States. [Washington] 1967. 62 p. UC267.U6 1967

----- Report on the feasibility of applying uniform cost-accounting standards to negotiated defense contracts, by the Comptroller General of the United States to the Committee on Banking and Currency, House of Representatives, 91st Congress, second session. Washington, U.S. Govt. Print. Off., 1970. 558 p. UC267.U6 1970
At head of title: Committee print.

----- Theory and practice of cost estimating from major acquisitions; report to the Congress [on the] Dept. of Defense, by the Comptroller General of the United States. [Washington, 1972] 36 p.
"B-163058, July 24, 1972"

----- Ways to make greater use of the life cycle costing acquisition technique in DOD, Department of Defense; report to the Congress by the Comptroller General of the United States. [Washington] 1973. 28 p.
"B-178214, May 21, 1973"

U.S. Office of the Director of Defense Research and Engineering. Task Force on Reducing Costs of Defense Systems Acquisition. Report of the Task Force on Reducing Costs of Defense System Acquisition, design-to-cost, commercial practice vs. Department of Defense practice.

Washington, Office of the Director of Defense Research and Engineering, for sale by the Supt. of Docs., U.S. Govt. Print. Off., 1973. 40 p.
"This report outlines and recommends a few key techniques based upon successful commercial practice, that should find useful application to almost all DOD programs."

Vombaur, F. Trowbridge. Fifty years of government contract law. Federal Bar journal, v. 29, fall 1970: 305-359. Law

Wagenveld, Mark. Pentagon to revise negotiation policies in effort to increase, stabilize contract profits. National journal, v. 3, Aug. 7, 1971: 1646-1654. JK1.N28, v. 3

Wright, James P. Weapon systems cost-effectiveness studies. GAO review, spring 1971: 9-16. HJ9701.G3, 1971
"GAO has expanded its efforts to inform the Congress of the process by which the Department of Defense acquires weapon systems. An integral part of this process—the analysis performed to compare alternative methods of fulfilling military objectives--is discussed."

PART II: Government-Sponsored Technical Reports Available to the General Public

Ames, Richard Earl, Philip James Coady, Jr., and Bruce Ethan Maxon. Considerations of return on capital investment and payment on progress in the defense shipbuilding industry. Monterey, Calif., Naval Postgraduate School, 1972. 158 p. AD-747 504

The thesis considers the impact of return on investment, progress payments, and cash flow in the shipbuilding industry. Analysis is devoted to the progress payment method recommended by the Navy Task Group to Study Shipbuilding Progress Payments. An examination is made of both government profit policy and contract financing as they relate to the shipbuilding industry. A computer model was developed which makes explicit the discounted cash flow in a given contract and displays all government payments to the contractor as well as the contractor's share of contract financing. The time-adjusted rate of return which is implied by the terms and conditions of the contract is computed by the model. A decision process for computing a profit negotiation position is developed which integrates (1) the IAC profit computation system, (2) the proposed shipbuilding progress payment method, and (3) the prevailing market conditions.

Baker, Bruce N. Improving cost estimating and analysis in DOD and NASA. Washington, George Washington University, School of Government and Business Administration, 1972. 196 p. AD-738 983

Sponsored in part by Army Materiel Command, Washington, D.C.

Research was based on the assumption that one of the principal keys to improving the procurement process is understanding how original government cost estimates are produced. This is the point where fact and fiction must be separated. The research questions were oriented to examine the current approaches, attitudes, and preferences of managers and practitioners of cost estimating and cost analysis within the Department of Defense and the National Aeronautics and Space Administration.

Benderly, Jason, Henry Solomon, and Kian C. Yu. The problems of estimating costs of naval ships. Washington, George Washington University, Program in Logistics, 1970. 30 p. AD-719 395

Report no.: Serial-T-239
Contract no.: N00014-67-A-0214
Project no.: NR-347-020

Problems discussed in the paper are those relating to methodology for estimating costs of new naval vessels at the preliminary design stage. Traditional approaches are discussed and evaluated with the benefit of numerical results. The importance of economic and engineering variables is considered and alternative procedures are proposed for their use.

Campbell, H. G. Aerospace price indexes. Santa Monica, Calif., Rand Corp., 1970. 36 p. AD-718 089

Report no.: R-568-PR
Contract no.: F44620-67-C-0045

An analysis of publications prepared by the Bureau of Labor Statistics relating to price indexes leads to a criticism of the sufficiency of data on aerospace items, with the exception of hourly earnings information. Overhead is an important cost component of major purchased materials and finished production items, but it has not been treated in any regularly published report. Thus any index purporting to measure price changes in aerospace products may be questioned. Simple and convenient indexes, including those presented here, are no substitute for reasonably thorough analysis and should be used only if such analysis cannot be accomplished.

Contractor costs during proposal evaluation and source selection--B-1 program. Washington, Logistics Management Institute, 1971. 47 p. AD-730 499

Report no.: LMI-71-2
Contract no.: SD-271
Project no.: SD-271-141

The purpose of the study was to develop data which may be used in improving Department of Defense weapon systems acquisition policy and reducing costs. LMI was tasked to explore the major factors contributing to the incurrence of contractor costs during proposal evaluation and source selection on the B-1 program. The study focused on the B-1 development contracts which were awarded following an unfunded contractor proposal effort. The task order also provided that LMI might examine proposal preparation costs and costs related to earlier B-1 efforts. The report displays contractor cost data associated with the B-1 program. Identifies the factors impacting on those costs, and discusses those factors.

Cost effectiveness analysis: bibliography, September 1968-October 1971. Alexandria, Va., Defense Documentation Center, 1972. 341 p. AD-738 800

DDC-TAS-71-65-1

Updates A DDC Bibliography on Cost Effectiveness Analysis covering the period 1967 to mid-1968. AD-675 900

Cost effectiveness in this bibliography relates to program evaluations, management techniques and problems, research and development, decision making design tradeoffs, related cost analysis and methodology, and systems value engineering. This bibliography represents a collection of unclassified references in the Defense Documentation Center's data bank that have been cataloged since August 1968.

Gossett, James L. Contractor accounting, reporting and estimating (CARE) Redstone Arsenal, Ala., Army Missile Command, Cost Analysis Division, 1971. 18 p. AD-730 776

Contractor accounting reporting and estimating (CARE) provides check lists that may be used as guides in evaluating the accounting system, financial reporting, and cost estimating capabilities of the contractor. Experience gained from the management review technique was used as a basis for the check lists.

Harman, Alvin J. Acquisition cost experience and predictability. Santa Monica, Calif., Rand Corp., 1971. 34 p. AD-725 875

Report no.: P-4505

Presented at the 26th Military Operations Research Society Symposium, held at Monterey, Calif., in Nov. 1970.

The paper focuses on comparing and predicting cost experiences of weapon system acquisitions, using cost factors (the ratios of actual to predicted costs) as a basis. A model is set out that considers several of the more pertinent influences of the development program and system involved on the magnitude of a cost factor. Basically, the length of the development phase of the new system acquisition and the technological advance sought for the new system are related to the cost estimation inaccuracy or real cost growth of the system.

Improved cost estimating techniques. Washington, Logistics Management Institute, 1970. 40 p. AD-738 859

Report no.: LMI-70-18

Contract no.: SD-271

Project no.: SD-271-135

Cost estimating, as used in this report, is the technique of forecasting how much the Government will pay for future development and acquisition of hardware, such as for an aircraft, a ship, a tank, components and parts. Three approaches to cost estimating are briefly described: analogy, parametric, and engineering.

Jarret, Charles Edward. An examination of the interface between cost accounting standards and the DOD Piecost Project in solving government contractor overhead cost problems. Washington, George Washington University, School of Government and Business Administration, 1971. 105 p. AD-738 972

The thesis examines the functions of cost accounting in government procurement and distinguishes between a control function and a pricing function. Indirect costs are examined as the largest block of the contractor cost as well as the least understood. The manner in which an expenditure becomes a part of contract cost is discussed along with the government function of price analysis. Peculiar problems of DOD cost principles, overlapping contract periods, and the government budgetary cycle are discussed as these affect the contract price.

Jones, Julius E. An analysis of incentive contracts with respect to risk. Fort Leavenworth, Kan., Army Command and General Staff College, 1971. 76 p. AD-733 380

The study discusses incentive contracts and cost overruns as related to industrial risk categories. The various aspects of risk considered by the Department of Defense have had contract modifications as a common factor reflecting risk. Based on the average percentage of contract modifications, industrial commodity categories are rated in terms of risk. Statistical tests were performed to analyze the tendency of incentive contracts, grouped by commodity categories, to over or underrun target costs. A conclusion is reached on high risk commodity categories in relation to target costs. Methods of reducing risk are discussed.

Katz, Irving, and Raymond E. Cavender. Weapon system life cycle costing. Wright-Patterson Air Force Base, Ohio, Air Force Logistics Command, Operations Analysis Office, 1971. 17 p. AD-729 866

Report no.: AFLC-OAR-14

Presented at the 10th annual Reliability and Maintainability Conference, Anaheim, Calif., June 28-30, 1971.

The paper reports on the work of drafting a DOD guide on the application of life cycle costing (LCC) to acquisition of major weapon systems. The approach prescribes standard LCC equations, the contractors provide the input for the equations, and the test program applied to the winning bidder provides the discipline needed if biased LCC estimates are to be avoided. The methodology is built around the general idea that system acquisition entails a multitude of decisions which should all be made through cost-effectiveness analyses, and that the cost aspects of these analyses should be in LCC terms.

Launer, Robert L, Harold F. Candy, and Shirley H. Carter. Cost growth—effects of contract size, duration, inflation, and technology level. Fort Lee, Va., Army Procurement Research Office, 1972. 51 p. AD-746 620

Report no.: PRO-007-2

Project no.: PRO-70-7

The purpose of the report is to present selected findings resulting from research on contract cost growth and to indicate the future directions to be taken in studying cost growth. It is assumed that the reader is familar with the March 1971 Army Procurement Research Office publication, Production Cost Growth, and has a basic understanding of procurement and the subject of cost growth in general. The report contains results of further analyses of the data obtained in the DD form 1500 and contractor performance evaluation forms.

Milton, Helen S. Cost-of-research index, 1920-1970. McLean, Va., Research Analysis Corp., 1971. 34 p. AD-726 935

Report no.: RAC-TP-430

Contract no.: DAHC19-69-C-0017

The objective of the cost-of-research index is to provide a measure of the change in the cost of a technical man-year of research in the U.S. and the change in the amount of research and development effort in terms of technical man-years of effort applied to it as derived from total dollars spent on R and D.

Mruz, Michael J. A dual industry analysis to give perspective to aerospace defense industry profits. Wright-Patterson Air Force Base, Ohio, Air Force Institute of Technology, School of Engineering, 1972. 106 p. AD-741 411

Report no.: GSA/SM/72-11

The study examines the aggregate profit rates of various samples of aerospace defense contractors within the particular operating environment of the defense and space systems market. To give perspective to this particular operating environment, a parallel study of the public utility industry and its operating environment is also included. The analysis includes a detailed examination of return indices for both industries and a comprehensive description of the particular industry operating environments. The elements of the operating environments studies are capital investment, research and development, demand, competition, and regulation and contracts.

Parker, John Mitchell, Jr. An examination of recent defense contract outcomes in the incentive environment. Wright-Patterson Air Force Base, Ohio, Air Force Institute of Technology, School of Engineering, 1971. 96 p. AD-731 764

Report no.: GSM/SM/71-9

The thesis presents an empirical evaluation of the outcomes of a large number of recently completed defense contracts. Profit outcomes and cost growth resulting from changes in the scope of the contract and from overrun/underrun are examined for incentive and fixed fee contracts. Incentive features such as share ratios and multiple incentives are investigated to determine their effect on contract outcomes. Linear regression and analysis of variance techniques are used to analyze the outcomes of 2,683 Army, Navy, and Air Force contracts. The types of contracts included in the data sample are fixed-price incentive, cost-plus-incentive-fee, and cost-plus-a-fixed-fee-contracts. An examination of multiple incentive contracts indicates how contracts with performance incentives, as well as cost incentives, tend to earn performance incentives regardless of the contract cost outcome.

Piekarz, Rolf, and Susan McIntosh. Cost growth and productivity in European aerospace development programs. Arlington, Va., Institute for Defense Analyses, 1970. 73 p. AD-725 478

Report no.: RP-P684

Contract no.: DAHC15-67-C-0011

The paper reports on an exploratory study to obtain tentative estimates about two aspects of European aerospace systems development costs in comparison to the U.S. experience: the percentage cost growth occurring during the program, and the absolute costs in dollar terms of foreign projects relative to costs of comparable U.S. projects. Eight major European commercial and military aerospace programs were investigated during the 1962-1969 period, and the cost outcomes of these programs were compared to the overall U.S. experience. The tentative findings suggest that proposals to adopt foreign organization, such as nationalization, to improve U.S. military technology development performance are unlikely to solve U.S. difficulties, and that applying U.S. cost models to evaluate foreign military RDT and efforts is not recommended for estimating the outputs and size of foreign programs.

Quade, E. S. A history of cost-effectiveness. Santa Monica, Calif., Rand Corp., 1971. 20 p. AD-730 430

Report no.: P-4557

Presented at the International Federation of Operational Research Societies International Cost-effectiveness Conference held in Washington on April 12-15, 1971.

Cost-effectiveness analysis and cost-benefit analysis, together with systems analysis, policy analysis, operations research, management science and other decision disciplines, seek to provide advice, to help in making decisions. Cost-effectiveness attempts to do this by comparing various actions that might be taken in terms of their costs and their effectiveness in achieving a desired goal.

Segal, Frank William. Capital allocation criteria for defense contractors. Washington, George Washington University, Program in Logistics, 1972. 300 p. AD-738 463

Report no.: Serial-T-256

Contract no.: N00014-67-A-0214

Project no.: NR-347-020

The study presents the development of theoretical criteria for ex ante, or predictive, allocation of prime defense contractor's capital resources to an individually negotiated procurement contract for the purpose of determining a fair ex ante price. A two-part ex ante pricing model is proposed in order to simulate market-determined pricing which is absent in the military procurement market. The approach employs capital theory to arrive at valuation and allocation of fixed capital.

U.S. Dept. of Defense. Casebook: life cycle costing in equipment procurement. Washington, 1970. 272 p. AD-727 274
Supt. of Docs. no.: D1.6/6:2

Life cycle costing (LCC) is an acquisition or procurement technique which considers operating, maintenance, and other costs of ownership as well as acquisition price, in the award of contracts for hardware and related support. The objective of the technique is to ensure that the hardware procured will result in the lowest overall ownership cost to the government during the life of the hardware. This casebook describes and illustrates the application of life cycle costing to competitive procurements of equipments below the level of major systems. The cases are based upon actual procurements although some have been modified in the interest of clarity and comprehension.

----- Report of the Pricing Subcommittee on DOD Cost Estimating Techniques. Washington, 1970. 67 p. AD-738 856

A review of the cost estimating techniques and capabilities that currently exist in the military departments. A major portion of this review consisted of visits to several subordinate commands of the services' materiel commands to observe how cost estimating and pricing is being performed on major weapon system programs. Estimates are discussed for three major purposes: planning, budget preparation, and contract pricing. These estimates were usually separate and distinct and little effort was made to compare them.

Weida, Ralph E., and George M. Sloan. The feasibility of establishing "should cost" as a permanent Air Force Contract Management Division/ Air Force Procurement function. Wright-Patterson Air Force Base, Ohio, Air Force Institute of Technology, School of Systems and Logistics, 1972. 153 p. AD-750 920
Report no.: SLSR-31-72B

The defense procurement environment has changed significantly during the past several years due to public and congressional criticism regarding large overruns and cost growth. In this respect the Air Force is experimenting with a specialized application of cost analysis called the 'should cost' concept. The feasibility of the concept was examined, and the desirability of establishing an on-going capability in AFCMD/AFPRO was concluded contingent upon continued top level support of the concept. In addition, manpower increases and training programs would be needed.

PART III: Government-Sponsored Technical Reports with Limited Distribution

Buck, Francis E., and Paul Gasuk. A cost-by-function model for avionic computer systems. Warminster, Pa., Naval Air Procurement Center, Systems Analysis and Engineering Dept., 1971. 2 v.
Vol. 1: AD-884 620L
Vol. 2: AD-884 621L

Report no.: NADC-SD-7088-VOL-1
Contract no.: A05-502-001/202-1/09901

A cost-by-function model for predicting acquisition costs of future avionic computer systems is derived and exhibited. The model predicts equipment costs on the basis of operational requirements of the equipment deduced from mission requirements and management constraints. The model can also predict costs directly from the specified technical requirements. The report contains a detailed description of the cost-by-function model, a user's guide, a programming guide, and the program listing.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commander, Naval Air Systems Command. Attn: Air-501. Washington, D.C. 20360 or Commander, Naval Air Development Center, Warminister, Pa. 18974.

Buono, A. Economic indices for avionics equipment. Addendum number 2. Warminster, Pa., Naval Air Development Center, Systems Analysis and Engineering Dept., 1972. 45 p. AD-902 117L

Report no.: NADC-SD-7014-ADD-2
Project no.: A05-502-001/202-1/09901
Addendum no. 2 to report dated Apr. 3, 1970. AD-872 383L

The data used in the determination of the economic indices presented herein were obtained from various Bureau of Labor Statistics Publications, and other government and private publications. These indices, used in conjunction with historical cost data, can provide comparative costs for avionics equipment purchased in previous years and aid in estimating future equipment costs. Indices were developed for labor, material and overhead, respectively, and then combined to arrive at a composite index for avionics.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commander, Naval Air Systems Command. Attn: Air-501. Washington, D.C. 20360.

Cira, Dan. CER Compendium: Army weapon and equipment systems. Washington, Office of the Comptroller of the Army, 1972. 31 p.
AD-904 548L

The purpose of this document is to identify and list sources of cost estimating relationships (CER's) developed for Army weapon and equipment systems. Most of the CER reports listed in this compendium were developed from Army in-house or contractually supported efforts. CER's developed by or for the other services were included as they seemed pertinent. Judgment was used to rule out various CER's discovered during the literature search that were of little interest to the Army.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commanding General, Army Materiel Command, Attn: AMCCPER. Washington, D.C. 20315.

Crum, George T. An analysis of the weapons system acquisition process in terms of modern organizational and management theories. Wright-Patterson Air Force Base, Ohio, Air Force Institute of Technology, School of Systems and Logistics, 1971. 96 p. AD-887 526

Report no.: SLSR-33-71A

The author proposes that much of the criticism of weapon system procurement stems from the public's and the Government's perception of the acquisition process. The weapons system acquisition process is conceptualized as the movement of an organization from a closed system through an open system back to a closed system. Timing of and the degree of closure is dependent on two types of requirements uncertainty, internal and external. When the closure of the technological core occurs before production is begun, the effects of internal and external uncertainties on cost growth are magnified. The paper analyzes the consequences of a mismatch between management strategy and the actual situation and its effect on cost growth.

No foreign distribution without approval of Commandant, Air Force Institute of Technology. Attn: Dean, School of Systems and Logistics, Wright-Patterson AFB, Ohio 45433.

Helmer, F. Theodore, and others. Bibliography on pricing methodology and cost estimating. [Colorado Springs] Air Force Academy, Dept. of Economics and Management, 1972. 131 p. AD-893 237L

The director of procurement policy, Headquarters, USAF, (DCS/ Systems and Logistics) has initiated Project Copper Impact - a plan to introduce modern pricing and costing techniques into the Air Force procurement process. This project will provide the vehicle for developing innovative pricing methods, making intelligent use of computer technology and improving the utilization of highly skilled personnel in the Air Force procurement system. This bibliography will provide a basis for the development of a contract pricing library for contract management and major buying organizations.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commandant, United States Air Force Academy, Attn: Director of Faculty Research, Colorado Springs, Colo. 80840.

Lange, Gunther, and others. Life cycle costing: problems, policies, and prospects. Fort Lee, Va., Army Logistics Management Center, 1970. 108 p. AD-875 909L

Project no.: PRO-70-6

The merits of life cycle costing (LCC) as a method of procurement by the Departments of Defense and Army are noted. The logic of LCC is appealing, but after years of effort, only a handful of LCC contracts have been awarded by the Army. The study investigates the current status of LCC procurement in the Army. The underlying deterrents responsible for the retardation of the LCC program are identified and analyzed. General and specific recommendations are presented.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commanding General, Army Materiel Command. Attn: AMCRP-SC, Washington, D.C. 20315.

Levenson, G. S., and others. Cost-estimating relationships for aircraft air-frames. Santa Monica, Calif., Rand Corp., 1971. 121 p. AD-891 956L

Report no.: R-761-PR
Contract no.: F44620-67-C-0045

Generalized cost-estimating relationships are presented for calculating development and production costs of aircraft airframes in a long-range planning context. The report presents separate estimating equations derived from historical data on 29 post-World War II military aircraft for the following cost elements: engineering, development support, flight test operations, tooling, manufacturing labor, manufacturing material, and quality control. An additional set of estimating equations is presented for prototype development. The estimating relationships are expressed as exponential equations derived by multiple regression techniques: these techniques relate costs or man-hours to aircraft physical and performance characteristics and to airframe production quantity. Also discussed are the analytical characteristics of the estimating relationships, the limitations that should be observed in their use, and a method of measuring uncertainty in the predicted airframe costs.

Distribution limited to U.S. Government agencies. Other requests must be referred to Headquarters, USAF, Directorate of Operational Requirements and Development Plans, Attn: Project Rand Group (AFRDQB), Washington, D.C. 20330.

Newman, Fred M., William H. Sutherland, and Roland V. Tiede. Preliminary analysis of R and D planning. McLean, Va., Research Analysis Corp., 1972. 62 p. AD-901 612L

Report no.: RAC-D9-CR
Contract no.: DAHC19-69-C-0017
Project no.: RAC-012.123

This report examines the purpose and nature of Army R and D planning as a part of the overall Army development process. It describes in broad terms the existing planning/decision making systems for R and D, including both its formal and informal structure. It highlights some of the major deficiencies in that system and recommends a number of improvements. Probably the most significant contribution of this report lies in the concise basis it establishes for relating, i.e., cross-walking, among budget entities, R and D objectives, and technologies. These and other essential elements of information are contained in the documents being produced at the various levels in the Army R and D community, but these elements are not now relatable in a concise and structured manner.

Distribution limited to U.S. Government agencies. Other requests must be referred to Headquarters, Department of the Army, Attn: DARD-PPP-S, Washington, D.C. 20310.

O'Flaherty, John. Cost categories. McLean, Va., Research Analysis Corp., 1971. 29 p. AD-882 567L

Report no.: RAC-CR-5
Contract no.: DAHC19-69-C-0017
Project no.: RAC-010.307

The report is one of a series, designed for use in a guidebook for life-cycle cost analysis in the Army Materiel Command. Its contents are based on weapon system cost studies. The concept used is that a good forecast of weapon system cost cannot be made using cost categories materially different from the categories in which historical costs for similar or related systems are available. A further premise is that, while historical costs are being collected in a new category structure, estimates must be made in that structure as a temporary expedient.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commanding General, Army Materiel Command. Attn: AMCCP-ER, Washington, D.C. 20315.

----- Fundamentals of the AMC cost data base. McLean, Va., Research Analysis Corp., 1971. 29 p. AD-883 551L

Report no.: RAC-CR-2
Contract no.: DAHC19-69-C-0017
Project no.: RAC-010.307

The report is a summary of a plan for the collection of weapon system cost data from contractors and in-house sources for use in the U.S. Army Materiel Command. It is designed as a section in a guidebook on life-cycle cost analysis.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commanding General, Army Materiel Command, Attn: AMCCP-ER, Washington, D.C. 20315.

Patterson, Michael L. Hardware cost growth. McLean, Va., Research Analysis Corp., 1970. 30 p. AD-883 695L

Contract no.: DAHC19-69-C-0017
Project no.: RAC-010.307

This study provides one of a series of reports containing guidebook material for life cycle cost analysis of weapon systems in the U.S. Army Materiel Command. The objective is to examine and resolve current policy, procedural, and technique inconsistencies that actuate and encourage 'growth' of hardware costs.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commanding General, Army Materiel Command, Attn: AMCCP-ER, Washington, D.C. 20315.

Stanard, Glenn N., and others. Cost-estimating relationships for contractor-performed helicopter airframe research and development. St. Louis, Army Aviation Systems Command, 1972. 34 p. AD-902 402L

Report no.: USAAVSCOM-TR-72-6

A relationship which can be used to estimate the cost of research and development for a proposed military helicopter is presented in this report. The cost estimate is for contractor-performed helicopter airframe R and D which excludes propulsion, avionics, weapons and recurring prototype fabrication costs. A cost-estimating relationship is recommended after considering the logical relationship and statistical correlation between historical costs and various descriptive parameters, such as weight and speed for eight helicopters. Data were located for the UH-1A, UH-2A, SH-3A, OH-6A, CH-46A.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commanding General, Army Aviation Systems Command. Attn: AMSAV-CC. St. Louis, Mo. 63103.

Sutherland, William H., James H. Moon, and Roland V. Tiede. The assessment of success in selected Army Development Programs. McLean, Va., Research Analysis Corp., 1972. 78 p. AD-891 864L

Report no.: RAC-CR-49

Contract no.: DAHC19-69-C-0017

Project no.: RAC-011.150

This study investigates selected successful Army Development Programs to determine (a) what management procedures and practices are common to successful programs, and (b) the degree to which initial estimates of performance, schedule, and cost meet actual values and whether these parameters constitute a useful measure of success. It finds that common factors in the selected successful program are: a viable basic concept; skillful use of communications; suitable use of skilled personnel; proper design of test programs. For three successful programs studied, initial performance estimates tended to be met, but initial schedule and cost estimates were generally a fraction of final values. Suggestions are made for improvements in management of development projects.

Distribution limited to U.S. Government agencies. Other requests must be referred to Office of the Chief of Research and Development (Army), Attn: DARD-PPM, Washington, D.C. 20310.

Suver, James D., and F. Theodore Helmer. A bibliography of selected studies in the weapons acquisition area. [Colorado Springs] Air Force Academy, Dept. of Economics and Management, 1972. 142 p. AD-892 503L

It is planned to update this listing on an annual basis. The following subject areas are included: changes; contract definition; contractual policies; contractor performance; cost control; cost estimating; defense-industry relations; government furnished property; incentive contracting; logistics and support; management systems; multi-year procurement; overhead cost control; personnel; profits; program management (contractor); project management (Government);

requests for proposals; research and development; risk and uncertainty; scheduling problems and techniques; source selection; subcontracting; systems analysis; technical performance measurement; total package procurement; total weapon systems acquisition problems.

Distribution limited to U.S. Government agencies. Other requests must be referred to Commandant, United States Air Force Academy, Attn: Director of Faculty Research, Colorado Springs, Colo. 80840.

Wehr, William S., and Wendell O. Woodward. Cost optimism: an outgrowth of the defense industry environment. Wright-Patterson Air Force Base, Ohio, Air Force Institute of Technology, School of Systems and Logistics, 1971. 159 p. AD-887 497

Report no.: SLSR-6-71A

The American people, apparently believing there has been waste of their tax dollars by the military and the defense industry, have become skeptical of the weapon system procurement process. The existence of this hostile attitude points to the need to develop an understanding of the cost factors in major weapon systems. In this paper, cost optimism is defined as a collection of factors which motivate defense contractors to make cost estimates which are lower than those which would otherwise be presented.

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